AMENDMENTS TO THE CLAIMS

The following is a complete listing of the claims, and replaces all earlier versions and listings.

1. (Currently Amended) Display apparatus comprising:

electron emission elements aligned in a matrix on a substrate and driven by column lines and row lines;

a column line drive unit for driving the column lines in a pulse width modulation manner by applying to each column line one of pulses which have different pulse widths respectively corresponding to gradation levels of a luminance signal to be displayed in the display apparatus;

a row line drive unit for sequentially driving the row lines;

first means for defining a plurality of blocks each of which includes at least two column lines[[,]] by dividing the column ~~lines~~ lines, and a plurality of gradation steps each of which includes at least two gradation levels[[,]] by dividing the gradation levels, and detecting a block driving status which indicates how the gradation levels in each of the gradation steps are applied to the columns in each block; and

second means for defining a plurality of periods within one horizontal interval, the periods being associated with widths of approximating pulses corresponding respectively to the gradation steps, calculating a voltage drop due to a resistance in the row line and the current flow by the approximating pulses on the column lines during each of the defined periods on the basis of the detected block driving status, determining a block voltage drop for each block estimated from the voltage drops over the plurality of periods,

and modifying the luminance signal for each block according to the determined block voltage drop.

2. (Original) The display apparatus according to Claim 1, wherein said first means detects the block driving status for each block by setting subintervals in one horizontal interval each of which corresponds to each block and compares the luminance signal with the gradation steps during each of the subintervals.

3. (Original) The display apparatus according to Claim 2, wherein said first means detects the block driving status which indicates how many column lines in the block have the gradation levels in each of the gradation steps.

4. (Previously Presented) The display apparatus according to Claim 1, wherein said column line drive unit produces output voltage with the pulse width varied according to a corrected luminance data added to a correction quantity calculated from the determined block voltage drop.

5. (Currently Amended) The display apparatus according to Claim 1, wherein said column drive unit produces output voltages varied according to [[the]] determined block voltage drops.

6. (Currently Amended) The display apparatus according to Claim 5, wherein said column line drive unit includes output circuits provided for the respective column lines and each output circuit selects either one of a plurality of voltage supply units

having different output potentials, and a peak value of a pulse applied to each column line is determined by a potential of the selected voltage supply unit.

7. (Currently Amended) The display apparatus according to Claim 1, wherein said second means modifies the luminance signal for each column line by producing a correction data for each column line in the block through a linear interpolation of [[the]] block correction data calculated from the block voltage drop.

8. (Currently Amended) The display apparatus according to Claim 1, wherein said row line drive unit comprises two subunits provided on both sides of the row lines and said subunits apply an equal voltage at [[the]] a same timing to each row line.

9. (Currently Amended) The display apparatus according to ~~Claim1,~~ Claim 1, wherein each of said electron emission ~~element~~ elements is a ~~type of~~ cold cathode electron emission device.

10. (Cancelled)

11. (Cancelled)

12. (Previously Presented) A method for driving a display apparatus comprising electron emission elements aligned in a matrix on a substrate and driven by column lines and row lines; a column line drive unit for driving the column lines in a pulse width modulation manner by applying to each column line one of pulses which have

different pulse widths respectively corresponding to gradation levels of a luminance signal to be displayed in the display apparatus, and a row line drive unit for sequentially driving the row lines, said method comprising the steps of:

defining a plurality of blocks each of which includes at least two column lines by dividing the column lines and a plurality of gradation steps each of which includes at least two gradation levels by dividing the gradation levels;

detecting a block driving status which indicates how the gradation levels in each of the gradation steps are applied to the columns in each block;

defining a plurality of periods within one horizontal interval, the periods being associated with widths of approximating pulses corresponding respectively to the gradation steps;

calculating a voltage drop due to a resistance in the row line and the current flow by the approximating pulses on the column lines during each of the defined periods on the basis of the detected block driving status, determining a block voltage drop for each block estimated from the voltage drops over the plurality of periods; and

modifying the luminance signal for each block according to the determined block voltage drop.

13. (Original) The method according to Claim 12, wherein said detecting step detects the block driving status for each block by setting subintervals in one horizontal interval each of which corresponds to each block and compares the luminance signal with the gradation steps during each of the subintervals.

14. (Original) The method according to Claim 13, wherein said detecting step detects the block driving status which indicates how many column lines in the block have the gradation levels in each of the gradation steps.

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)